XVII

JOINT MESSAGEFORM

SECURITY [redacted]

SPACE BELOW RESERVED FOR COMMUNICATION CENTER

12 13 M 12 20 03

8P 1 of 6

PRECEDENCE	TYPE MSG. (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
ACTION: OPERATIONAL IMMEDIATE	BOOK	MULTI	SINGLE			
INFO: OPERATIONAL IMMEDIATE						

FROM:

6565 TEST WG, VANDENBERG AFB, CALIF

CLASSIFICATION CHANGED TO [redacted]

SPECIAL INSTRUCTIONS

TO:

COMDR, HQ AFBMD, LOS ANGELES 45, CALIF

HQ 6594TH TEST WING (SATELLITE), SUNNYVALE, CALIF

LOCKHEED MISSILES & SPACE DIV, SUNNYVALE, CALIF

LOCKHEED MISSILES & SPACE DIV, VAFB, CALIF (COURIER)

DOUGLAS AIRCRAFT COMPANY, VAFB, CALIF (COURIER)

INFO: 1ST MISSILE DIVISION, VAFB, CALIF (COURIER)

AFBMD TECHNICAL EVALUATION STAFF, P. O. BOX 1567, VAFB, CALIF (COURIER)

Re File Copy

598 COMBAT SUPP. SQ. Copy No. 60-1480

SECRET/VWZ 03936 (VWZ 11-4)

LOSA FOR WDZI: 6594TH TM FOR COL MOORE; IMSD/SUNNYVALE FOR DEPT 61-44 (B. V. MARSH); IMSD/VAFB FOR DEPT 65-44 AND 61-70; DAC FOR MR. HECKMAN

INFO: IMD FOR COMMAND POST; AFBMD TECH EVAL STAFF FOR MR. PISCHEL.

SUBJECT: FLASH REPORT OF LAUNCHING OF DISCOVERER XVII (NIGHT SHIFT-PRESTO) FROM VANDENBERG AFB.

1. DISCOVERER XVII COMPRISED OF THOR BOOSTER NR 297 AND AGENA B ORBITAL STAGE NR 1062 WAS LAUNCHED FROM SM-75-3, PAD 5, AT 1242:32.66 PST ON 12 NOVEMBER 1960. THE PRIMARY LAUNCH OBJECTIVE TO PLACE THE

DATE	TIME
12	1700
MONTH: NOV	YEAR: 1960

SYMBOL: VWZ

SIGNATURE

TYPED NAME AND TITLE (Signature, if required): HAROLD M. POWELL, JR., MAJOR, USAF

TYPED (or stamped) NAME AND TITLE: WILLIAM F. HEISLER, LT COL, USAF DEPUTY COMMANDER FOR SPACE LAUNCHES

PHONE 8-5050 PAGE NR 1

SECURITY CLASSIFICATION [redacted]

DD FORM 173 REPLACES DD FORM 175, 1 OCT 49, WHICH WILL BE USED UNTIL EXHAUSTED

JOINT MESSAGEFORM CONFIRMATION SHEET

SECURITY CLASSIFICATION [redacted] CONFIDENTIAL

FROM: 6565 TEST WG, VANDENBERG AFB, CALIF

386

DISCOVERER SATELLITE WITH PAYLOAD INTO NEAR-POLAR ORBIT WAS ACHIEVED. ORBIT HAS BEEN CONFIRMED THROUGH FIRST PASS ACQUISITION BY THE KODIAK AND HAWAIIAN STATIONS.

2. THE PRIMARY TEST OBJECTIVES FOR THE DISCOVERER XVII LAUNCH AND ASCENT WERE AS FOLLOWS (REFERENCE DETAILED TEST OBJECTIVES, DMD 446404, SECTION 2).

(A) DISCOVERER BOOSTER:

THE BOOSTER MUST POSITION THE DISCOVERER VEHICLE WITHIN 5 NAUTICAL MILES OF A SPECIFIED POINT AT BURNOUT WITH A FLIGHT PATH ANGLE WITHIN 4 DEGREES AND A VELOCITY WITHIN 500 FPS OF THE SPECIFIED NOMINAL VALUES.

(B) AGENA AIRFRAME AND ADAPTER:

THE AGENA AIRFRAME AND ADAPTER MUST WITHSTAND THE LAUNCH AND FLIGHT ENVIRONMENT.

(C) AGENA PROPULSION SYSTEM:

THE AGENA RETRO-ROCKETS MUST PROVIDE THE THRUST REQUIRED TO EFFECT SEPARATION. THE AGENA PROPULSION SYSTEM MUST PROVIDE THE IMPULSE REQUIRED AFTER SEPARATION TO ATTAIN ORBITAL VELOCITY AT THE INJECTION ATTITUDE.

(D) AGENA ELECTRICAL POWER SYSTEM:

THE AGENA ELECTRICAL POWER SYSTEM MUST PROVIDE THE ELECTRICAL POWER REQUIRED FOR SATISFACTORY SYSTEMS OPERATION.

(E) AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM:

THE AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM MUST DERIVE

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THE TIME TO INITIATE ORBITAL BOOST AND THE VELOCITY-TO-BE-GAINED DURING ORBITAL BOOST AND MUST INITIATE AND TERMINATE ORBITAL BOOST IN ACCORDANCE WITH THESE VALUES. THE SYSTEM MUST ALSO MAINTAIN PROPER VEHICLE ATTITUDE AFTER SEPARATION AND MUST CONTROL THE TIME AND SEQUENCE OF CERTAIN SPECIFIED OPERATIONS.

(F) AGENA SPACE COMMUNICATIONS SYSTEM.

THE AGENA SPACE COMMUNICATIONS SYSTEM MUST PROVIDE A CONTINUOUS IDENTIFICATION SIGNAL AND TRANSPONDEROPERATION AS REQUIRED FOR TRACKING AND COMMAND BY GROUND STATIONS.

(G) GROUND SUPPORT EQUIPMENT.

THE GROUND SUPPORT EQUIPMENT MUST SATISFACTORILY CHECK-OUT THE DISCOVERER BOOSTER AND ORBITAL STAGE.

(H) DISCOVERER SYSTEM FACILITIES.

THE DISCOVERER SYSTEM FACILITIES MUST PROVIDE ADEQUATE DATA RECORDS; A SATISFACTORY GROUND COMMAND CAPABILITY; AND NECESSARY STATION COMMUNICATIONS.

3. A PRELIMINARY EVALUATION OF THE TEST OBJECTIVE ACHIEVEMENT FOLLOWS:

(A) DISCOVERER BOOSTER - OBJECTIVE ACHIEVED.

BOOSTER MECO OCCURRED AT T+163.4 SEC. AND VECO AT T+172.6 SEC. VEHICLE POSITION, VELOCITY AND FLIGHT PATH ANGLE AT BURNOUT WERE WITHIN THE PRESCRIBED LIMITS.

(B) AGENA AIRFRAME AND ADAPTER - OBJECTIVE ACHIEVED.

NO EVIDENCE OF STRUCTURAL DIFFICULTIES HAS BEEN NOTED.

(C) AGENA PROPULSION SYSTEM - OBJECTIVEACHIEVED.

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THE AGENA RETRO-ROCKETS FIRED AND ALTHOUGH SEPARATION MONITOR DATA WERE NOT OBTAINED, THE SEPARATION AT T+184.6 SEC APPEARS TO HAVE BEEN SATISFACTORY. AGENA ENGINE IGNITION OCCURRED AT T+231.9 SEC AND SHUTDOWN OCCURRED AT T+474.7 SEC AFTER A BURNING TIME OF 242.8 SEC. CHAMBER PRESSURE DATA WERE NOT OBTAINED, BUT ENGINE OPERATION APPEARS TO HAVE BEEN SATISFACTORY. THE SENSIBLE VELOCITY GAIN OF 16,760 FPS DURING AGENA ENGINE OPERATION WAS SUFFICIENT FOR ORBIT ATTAINMENT AT THE INJECTION ALTITUDE.

(D) AGENA ELECTRICAL POWER SYSTEM - OBJECTIVE ACHIEVED.

NO EVIDENCE OF ELECTRICAL POWER SYSTEM MALFUNCTION HAS BEEN NOTED.

(E) AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM - OBJECTIVE ACHIEVED.

THE TIME FOR INITIATION OF ORBITAL STAGE BOOST AND THE REQUIRED VELOCITY-TO-BE-GAINED WERE DERIVED FROM THE PT MUGU VERDORT TRACKING DATA. 4 SEC OF COMMAND 5 AND 8 SEC OF COMMAND 6 WERE TRANSMITTED AND RECEIVED BY THE VEHICLE. THE VELOCITY GAIN OF 16,760 FEET PER SEC CORRESPONDS TO THE INTEGRATOR SETTING AS ADJUSTED BY COMMAND 6 AND THE ENGINE SHUTDOWN APPEARS TO HAVE BEEN COMMANDED BY THE INTEGRATOR. PROPER VEHICLE ATTITUDE WAS MAINTAINED DURING BOTH THE COAST AND THE ORBITAL STAGE BOOST PHASES OF THE FLIGHT.

(F) AGENA SPACE COMMUNICATIONS SYSTEM - OBJECTIVE ACHIEVED.

OPERATION OF THE ACQUISITION BEACON AND THE S-BAND TRANSPONDER WERE SATISFACTORY. THE AQUISITION BEACON WAS TRACK[redacted]

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FOR A TOTAL OF 600 SEC AND THE TRANSPONDER FOR A TOTAL OF 517 SEC.

(G) GROUND SUPPORT EQUIPMENT - OBJECTIVE ACHIEVED.

THE DISCOVERER BOOSTER AND ORBITAL STAGE WERE SATISFACTORILY CHECKED OUT DURING THE COUNTDOWN BY THE GROUND SUPPORT EQUIPMENT. TWO 22V BATTERIES WERE CONNECTED TO THE D-TIMER PULSING NETWORK TO RAISE THE VOLTAGE TO THE LEVEL NECESSARY TO START THE D-TIMER. GSE OPERATION OTHERWISE NORMAL.

(H) DISCOVERER SYSTEM FACILITIES - OBJECTIVE ACHIEVED.

TELEMETRY DATA WERE RECEIVED AT VAFB FROM LIFTOFF TO T+511 SEC AND THE RECORDS ARE OF GOOD QUALITY. GROUND COMMANDS WERE SATISFACTORILY TRANSMITTED. STATION COMMUNICATIONS WERE ADEQUATE.

4. ADDITIONAL INFO:

(A) DEPARTURE AZIMUTH OF THE VEHICLE FROM THE LAUNCH PAD WAS ONE HUNDRED APPROXIMATELY DEGREES TO THE RIGHT OF NOMINAL. THE TRAJECTORY WAS SLIGHTLY BELOW THE PREDICTED. INJECTION ALTITUDE WAS 120 ST. ML; INJECTION VELOCITY WAS 26,000 FPS; AND INJECTION FLIGHT PATH ANGLE WAS 0 DEGREES AS DETERMINED FROM THE VERLORT PLOTTING BOARD CHART.

(B) HOLDS DURING THE COUNTDOWN WERE REQUIRED TO INSTALL THE BATTERIES IN THE D-TIMER PULSING NETWORK AND FOR COMBINED NECESSITY FOR RECHECKING THE RANGE SAFETY COTAR SYSTEM; AWAITING THE RESULTS OF WIND SHEAR CALCULATIONS, AND AWAITING AREA CLEARANCE (TRAINS). TOTAL HOLD TIME WAS 104 MINUTES.

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VWG	2		[redacted]	

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JOINT MESSAGEFORM - CONFIRMATION SHEET

SECURITY CLASSIFICATION [redacted]

FROM: 6563 TEST WG, VANDENBERG AFB, CALIF

[redacted]

(C) THE TELEMETRY SHIP RECEIVED THE TELEMETRY SIGNAL FROM T+360 SEC TO T+665 SEC.

(D) PAD DAMAGE WAS LIGHT. RECOVERY TIME IS ESTIMATED TO BE FIVE DAYS OR LESS.

(E) LAUNCH WAS ACCOMPLISHED ON SECOND ATTEMPT. PREVIOUS COUNTDOWN ON 11 NOVEMBER 1960 WAS TERMINATED BECAUSE T-900 UMBILICAL WAS INADVERTENTLY PULLED OUT OF THE VEHICLE RECEPTACLE WHEN THE THOR TRANSPORTER-ERECTOR WAS LOWERED.

SYMBOL: VWZ | PAGE NO. 6 | NO. OF PAGES 6 | SECURITY CLASSIFICATION [redacted] | DATE/TIME

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